

PREPARED FOR:
CITY OF CAMBRIDGE, MASSACHUSETTS

October 25, 2022



SCALE: 1"=100'



Located in West Cambridge, the stretch of Brattle Street between Sparks Street and Mason Street/Ash Street

The Massachusetts State Plane coordinate system, (Zone 3601) NAD83.

CLIENT
CITY OF CAMBRIDGE, MA
CONTACT: Andreas Wolfe
ADDRESS: 344 Broadway
Cambridge, MA 02139
PHONE: (617) 349-9162
EMAIL: awolfe@cambridgema.gov

KITTELSON & ASSOCIATES, INC.
CONTACT: Radu Nan, P.E.
ADDRESS: One Washington Mall, Suite 1101
Boston, MA 02108
PHONE: 617.377.4004
EMAIL: rnan@kittelson.com

INDEX

These plans have been digitally signed and sealed by Radu I. Nan, PE on the date affixed by the seal using a Digital Signature



**KITTELSON
& ASSOCIATES**

ONE WASHINGTON MALL, SUITE 1101
BOSTON, MA 02108
P 617.540.0555

[illegible]

Submission Date: 10/25/2022		
Drawn: AJD	Designed: AJD	Checked: RIN

PROJECT NO.
23826

BRATTLE STREET PHASE 1



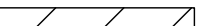









TITLE

SHEET NO.
T-1


ABBREVIATIONS

CONC	Cement Concrete
DWP	Detectable Warning Panel
EXIST	Existing
GRAN	Granite
PBS	Post both sides
PROP	Proposed
R	Radius
REM	Remove
RET	Retain
R&R	Remove and reset
TYP	Typical

LEGEND

	Existing Fire Hydrant		Proposed Steel Sign Post		PAVEMENT MARKING ERADICATION AREA
	Existing Street Light		Proposed R1-6 (On-Street Base)		
	Existing Utility Pole		Proposed Curb Reset		
	Existing Sign (Steel Post)		Proposed Concrete Separator		
	Existing Signal Pole (with Mast Arm)				
	Existing Sign		Proposed Sign		

PAVEMENT MARKING LEGEND

	6" BROKEN YELLOW CENTER LINE - 2' MARK, 4' SKIP		8" SOLID WHITE CHANNELIZATION LINES (SWCHL) - 45°
	6" DASHED WHITE LINE - 2' MARK, 4' SKIP		8" SOLID YELLOW CHANNELIZATION LINES (SYCHL) - 45°
	DOUBLE YELLOW CENTER LINE - 6" LINES, 4" APART		PAVEMENT ARROWS - WHITE
	6" SOLID WHITE LINE		BIKE LANE PAVEMENT MARKING
	6" SOLID YELLOW CENTER LINE		YIELD LINE
	6" SOLID YELLOW LINE		HIGH FRICTION GREEN SURFACE TREATMENT (HFGST)
	10' CROSSWALK - 2'-WIDE BAR, 2' SKIP		EXISTING PAVEMENT MARKING



KITTELSON
& ASSOCIATES

ONE WASHINGTON MALL, SUITE 1101
BOSTON, MA 02108
P 617.540.0555

[illegible]

Submission Date:
10/25/2022

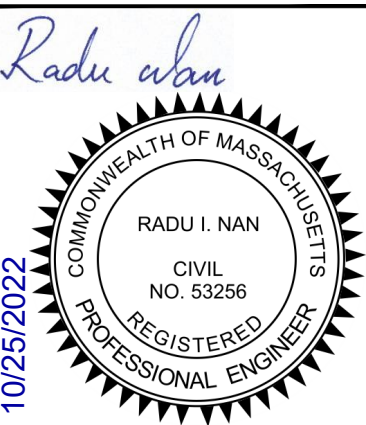
Drawn: AJD	Designed: AJD	Checked: RIN
---------------	------------------	-----------------

PROJECT NO.
23826

BRATTLE STREET PHASE 1

LEGEND & ABBREVIATIONS

SHEET NO.
T-2



TRAFFIC MANAGEMENT:

1. All traffic control devices shall conform with the latest edition of the manual on uniform traffic control devices (m.u.t.c.d)
2. All sign locations on details are shown schematically. final locations shall be determined based on actual field conditions and city approval
3. Additional traffic control devices shall be provided upon the city's request
4. All temporary signage and traffic control devices shall be properly secured
5. All drums not otherwise specified shall be equipped with type "c" -steady burn warning lights
6. Temporary traffic lanes within the work zone shall be a minimum of 11 feet
7. Advisory speed limits shall be posted as directed by the city
8. Flashing arrow boards shall be utilized for lane shifts where the existing speed limit is 35 m.p.h. or greater
9. Non-essential traffic control devices shall be covered or removed during non-work hours
10. All travel ways shall be protected from dust and construction debris at all times
11. Traffic control includes necessary street sweeping and snow removal within the work zone
12. Vehicular and pedestrian shall be allowed access to private property at all times during construction
13. All traffic control devices shall be placed and moved as necessary to maintain adequate abutter access at all times. work may require additional signage and other traffic control devices, grading and temporary pavement for passage of pedestrian, vehicular and emergency traffic through work areas both during and after work hours
14. Each abutter shall be notified by the contractor at least 24 hours in advance of the start of any work that will require the temporary closure of access
15. Construction work zone shall be staged as to allow for continuous access at drive entrances and to minimize detours to Cambridge roads
16. Excavations shall be protected by steel plates or barricades during non-work hours
17. Grade separations in excess of 2" during non working hours will require delineation by drums
18. Excavation edges in excess of 4" deep shall be protected during non-working hours by backfilling with a wedge of gravel compacted to a 4:1 slope
19. Safe pedestrian walkways shall be provided and access to local businesses and residences. public walkways shall remain open and accessible unless Otherwise directed by city.
20. All existing pedestrian crossings shall be maintained. alternative crossing shall be provided when existing crossings are disrupted by construction activity. temporary locations, safety signage and safety controls shall be approved by the city prior to implementation
21. Pedestrian walkways shall be protected along work zone with concrete barriers and fencing
22. Police details shall be scheduled and coordinated by the contractor to maintain the safety of pedestrian and vehicular traffic
23. Detours to shall only be allowed as indicated or as approved by the city of Cambridge traffic and parking department



ONE WASHINGTON MALL, SUITE 1101
BOSTON, MA 02108
P 617.540.0555

[illegible]

Submission Date:
10/25/2022

Drawn: AJD	Designed: AJD	Checked: RIN
---------------	------------------	-----------------

PROJECT NO.
23826

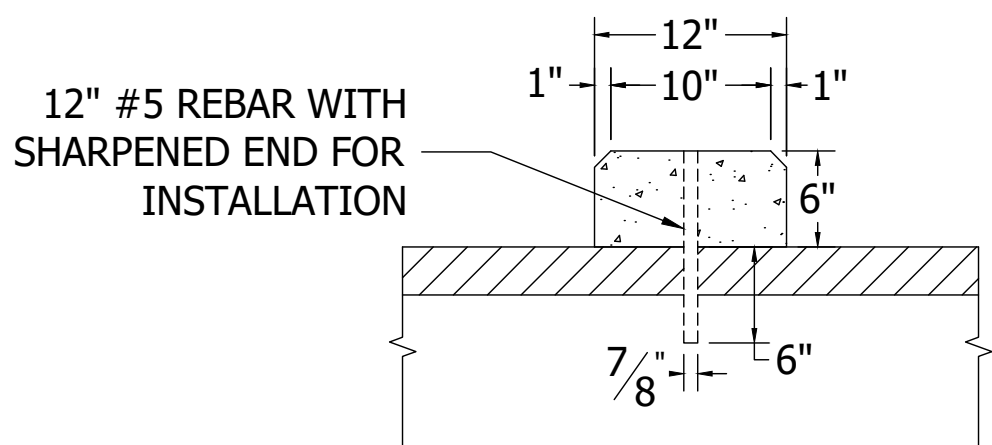
BRATTLE STREET PHASE 1

GENERAL NOTES

SHEET NO.
T-3

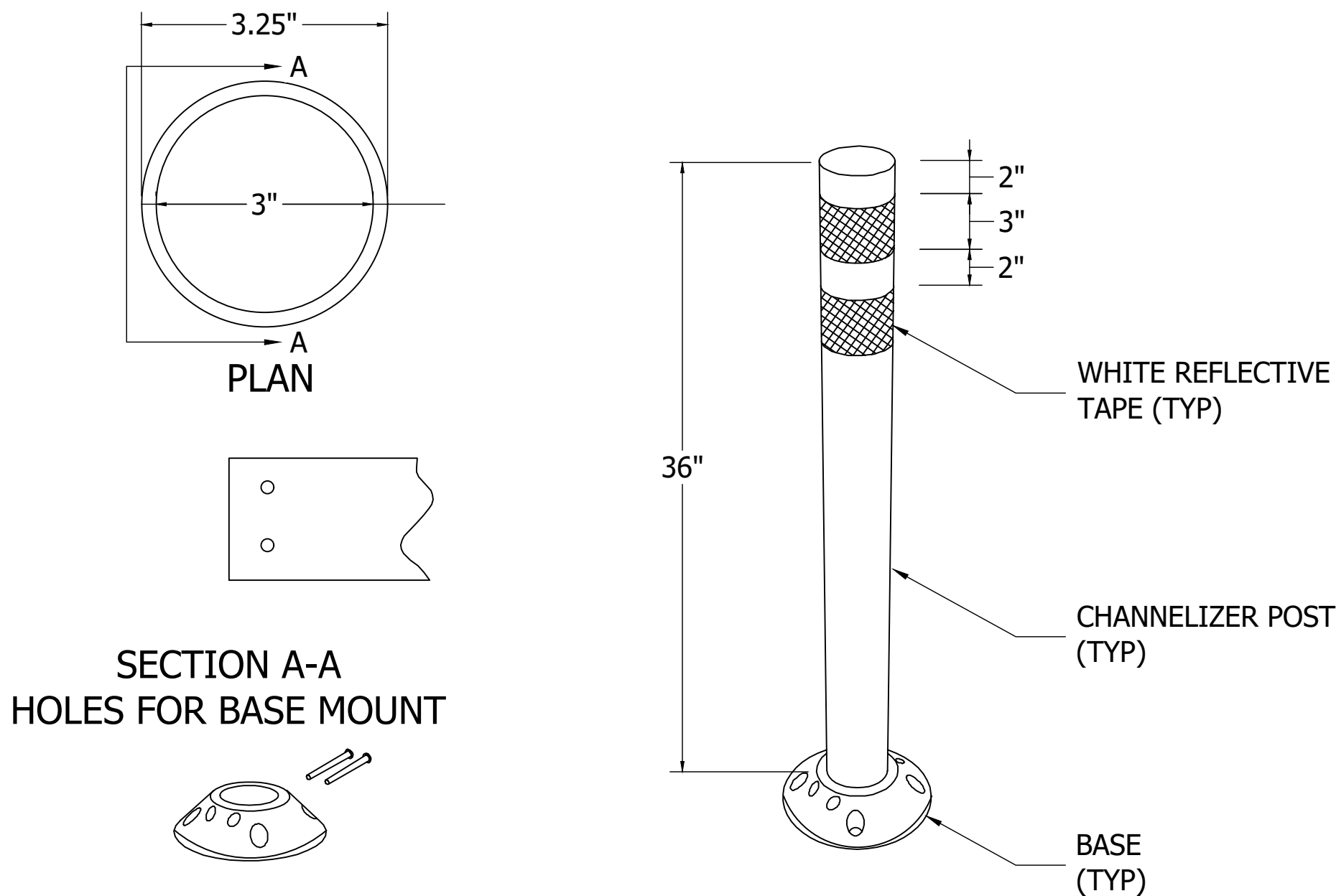


DETAILS



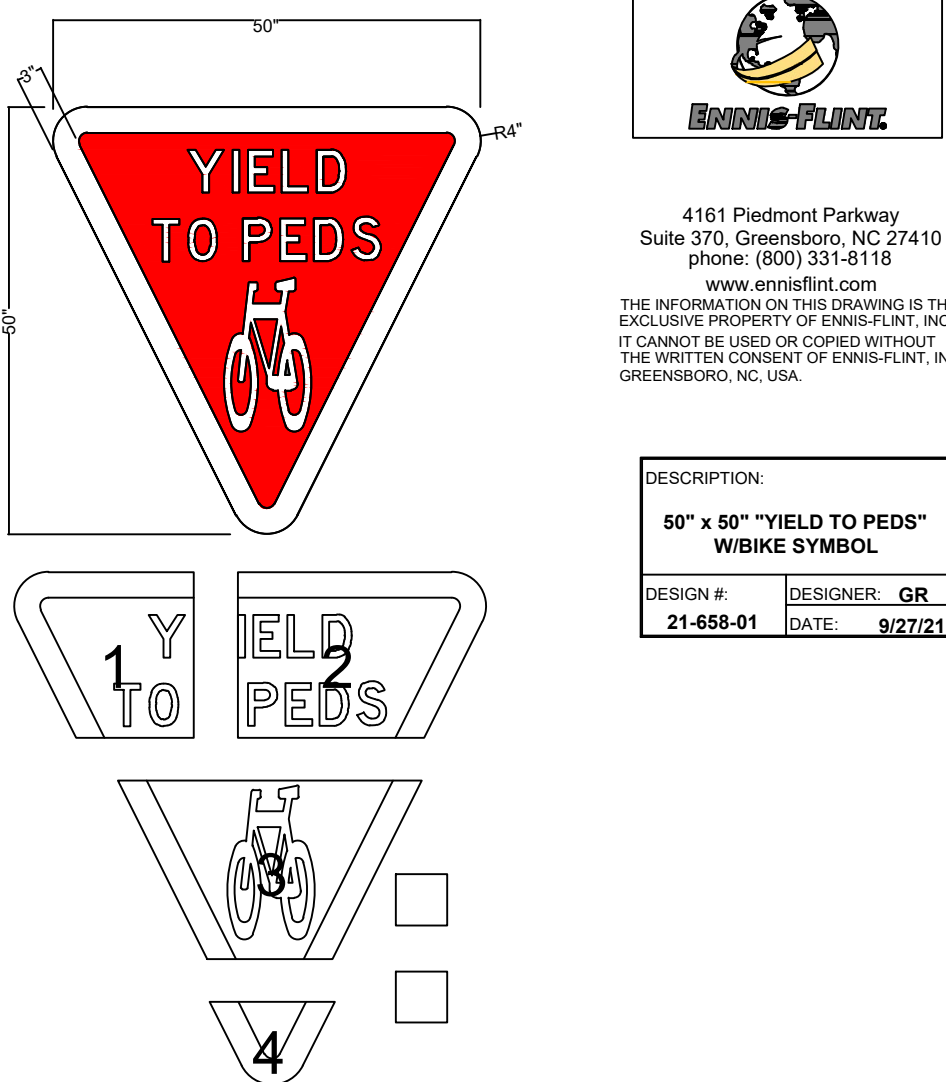
- NOTES:
1. CONCRETE TO BE 5000 PSO, SULFATE RESISTANT WITH FIBER REINFORCEMENT.
 2. UNITS TO BE SECURED USING #5 CORROSION RESISTANT REBAR HAND DRIVEN TO DEPTHS INDICATED.

12" PRECAST CONCRETE CURBING FOR BICYCLE LANES
(N.T.S.)

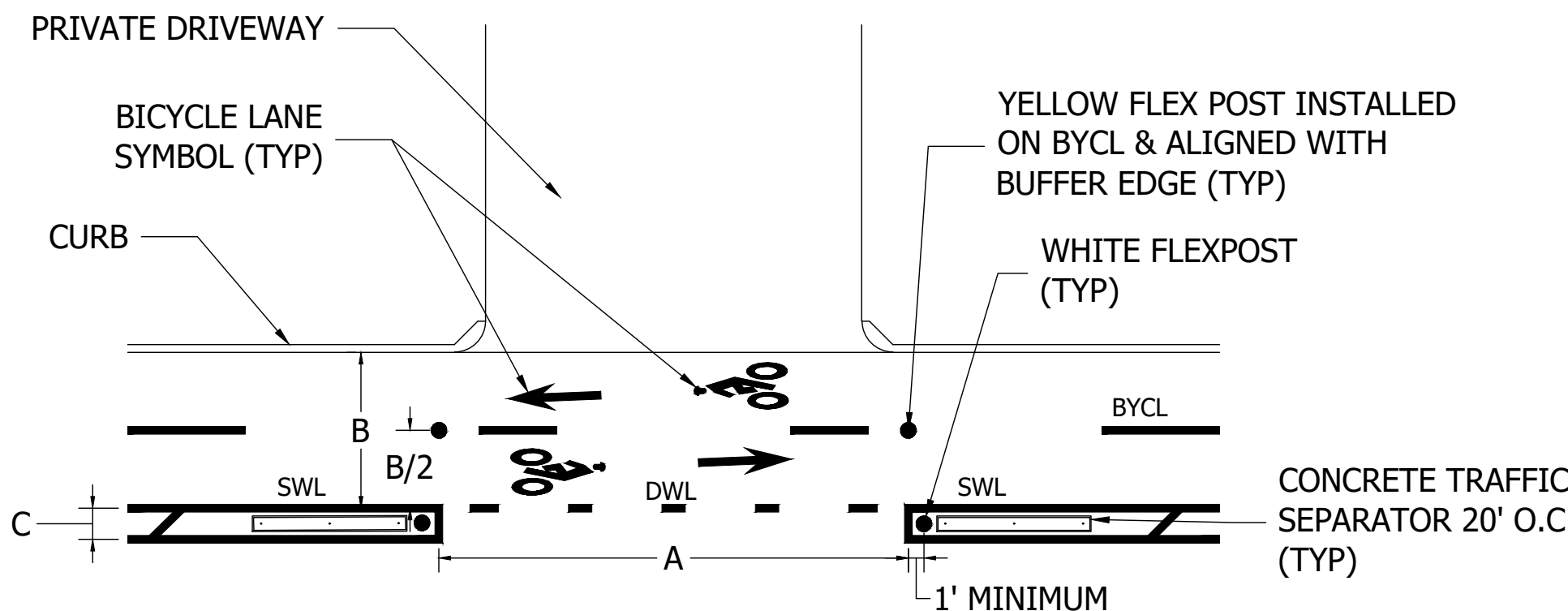


36" WHITE FLEXPOST DETAIL (N.T.S.)

- FLEXPOSTS NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 2. DIMENSIONS, MATERIALS, AND ATTACHMENTS MAY VARY BETWEEN MANUFACTURERS.
 3. COLOR OF POST SHALL BE WHITE EXCEPT WHEN PLACED ON THE CENTERLINE OF A TWO-WAY BICYCLE FACILITY.

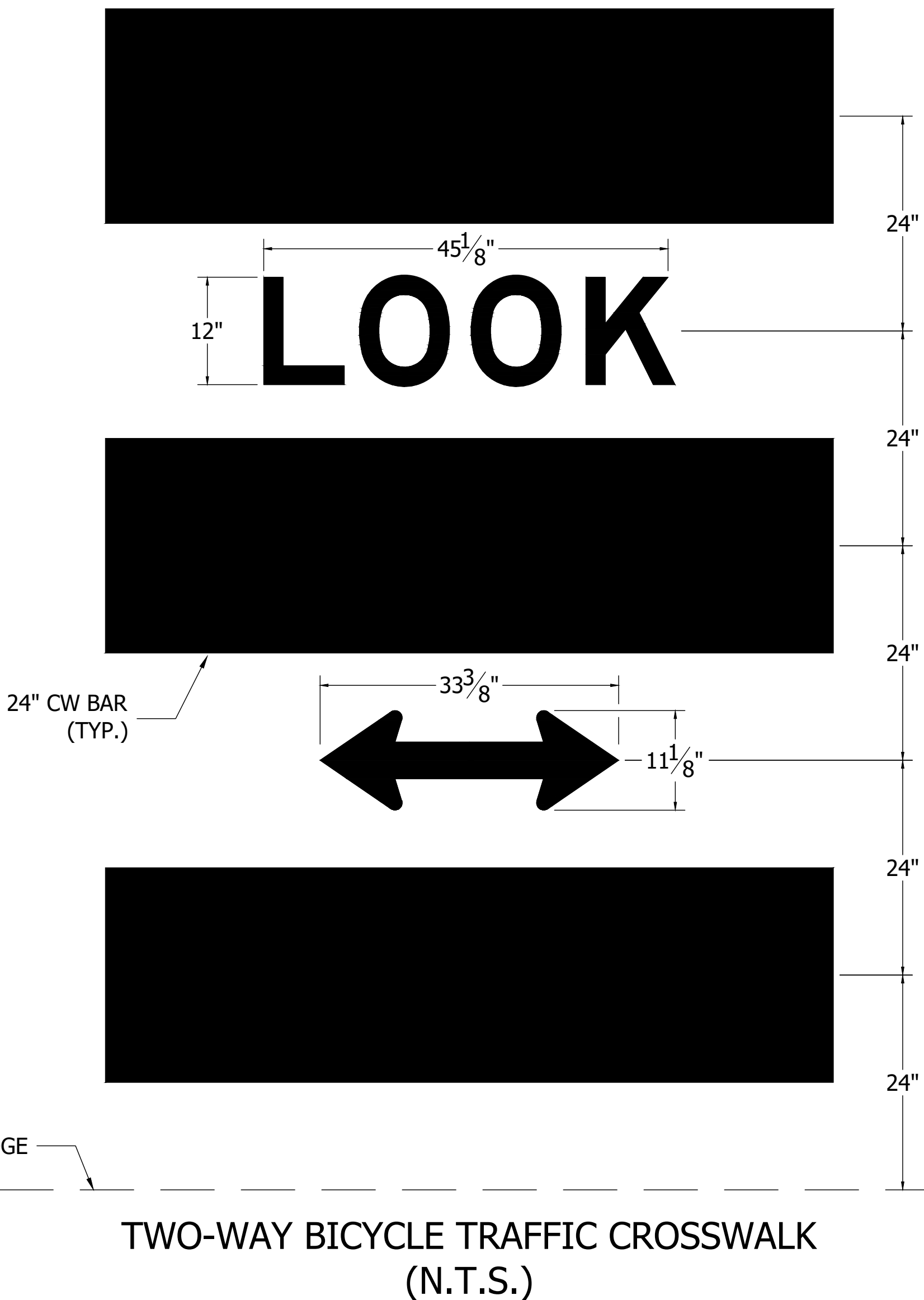


YIELD TO PEDS PAVEMENT LEGEND (N.T.S.)



- NOTES:
1. DIMENSIONS OF OPENING IN BUFFER (A), BIKE LANE (B), AND BUFFER (C) SHALL FOLLOW PLANS

TWO-WAY BICYCLE LANE DRIVEWAY TREATMENT (N.T.S.)



**KITTELSON
& ASSOCIATES**

ONE WASHINGTON MALL, SUITE 1101
BOSTON, MA 02108
2617.540.0555

[illegible]

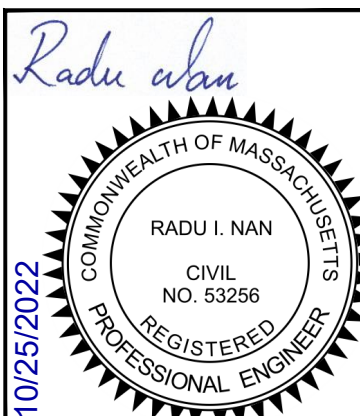
Submission Date: 10/25/2022		
Drawn: AJD	Designed: AJD	Checked: RIN

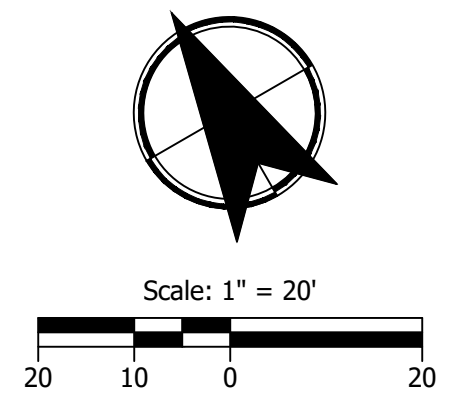
PROJECT N
23820

RDATTIE STREET PHASE 1

DETAILS

SHEET NO.
D-1





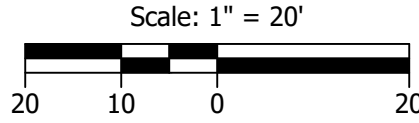
KITTELSON & ASSOCIATES
ONE WASHINGTON MALL, SUITE 1101
BOSTON, MA 02108
P 617.540.0555

#	DATE	REVISION	APP'D

Submission Date: 10/25/2022
Drawn: AJD Designed: AJD Checked: RIN
PROJECT NO. 23826

BRATTLE STREET PHASE 1
EXISTING CONDITIONS

SHEET NO. EX-2



**KITTELSON
& ASSOCIATES**

ONE WASHINGTON MALL, SUITE 1101
BOSTON, MA 02108
P 617.540.0555

[illegible]

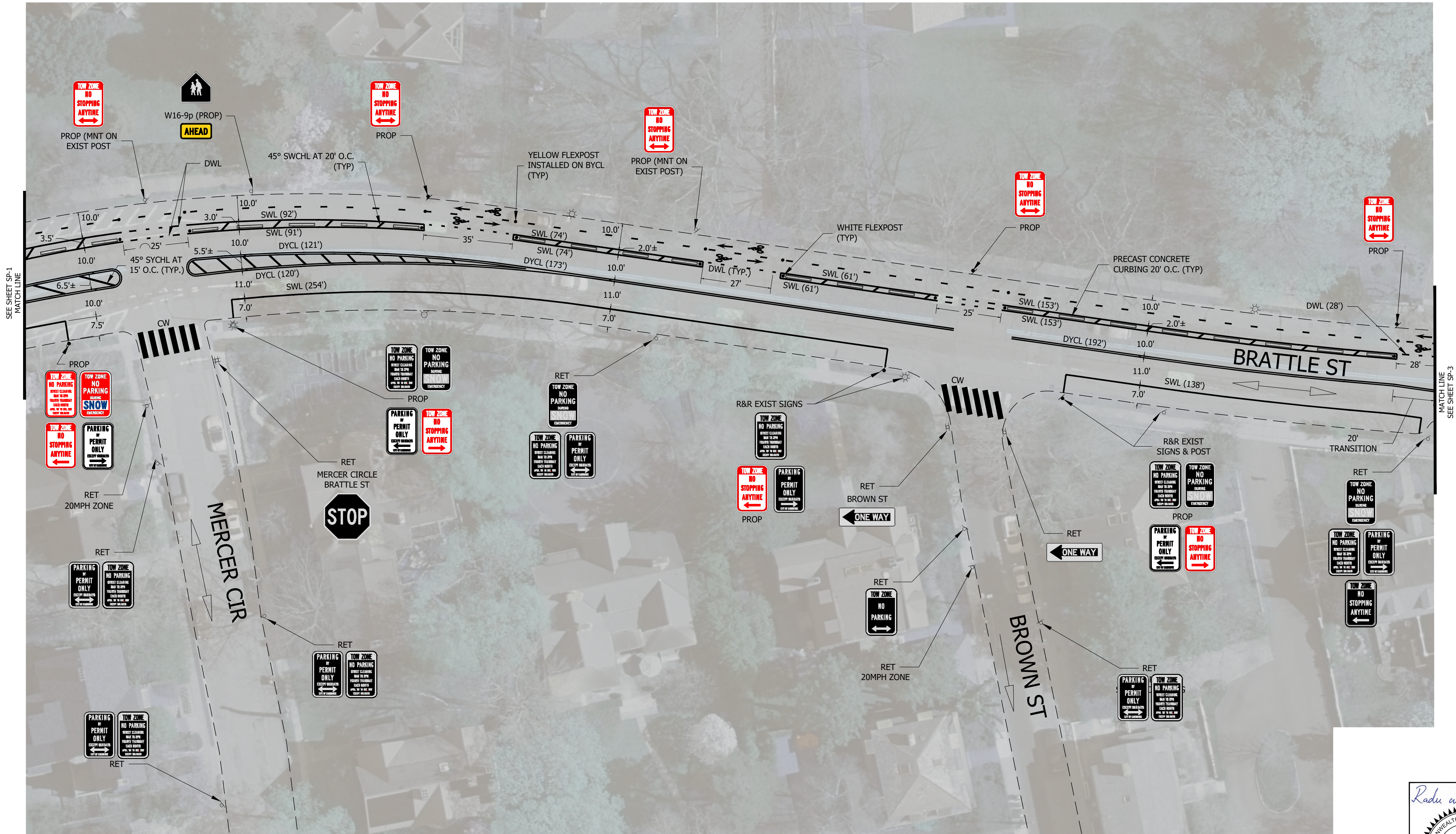
Submission Date: 10/25/2022		
Drawn: AJD	Designed: AJD	Checked: RIN

PROJECT NO.
23826

BRATTLE STREET PHASE 1

SIGNING & MARKING PLAN

SHEET NO.
SP-2



10/25/2022

Radu I. Nan



COMMONWEALTH OF MASSACHUSETTS
RADU I. NAN
CIVIL
NO. 53256
REGISTERED
PROFESSIONAL ENGINEER



Submission Date: 10/25/2022		
Drawn: AJD	Designed: AJD	Checked RIN

BRATTLE STREET PHASE 1	SIGNING & MARKING PLAN
------------------------	------------------------

SHEET NO.
SP-4

TRAFFIC SIGN SUMMARY

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT			BACK- GROUND	LEGEND	BORDER			
R10-15L BIKE	30	30	TURNING VEHICLES YIELD TO	2	YELLOW/ WHITE	BLACK/ RED	BLACK	MOUNT ON 2" POST (1) & EXIST LIGHT POLE (1)	6.25	12.50
R10-15R BIKE	30	30	TURNING VEHICLES YIELD TO	1	YELLOW/ WHITE	BLACK/ RED	BLACK	MOUNT ON EXIST LIGHT POLE (1)	6.25	6.25
-	-	-	BICYCLE WAYFINDING: HARVARD SQ. CHARLES RIVER	1	GREEN	WHITE	WHITE	MOUNT ON 2" POST IN STREET	-	-
-	12	18	RESERVED PARKING [ACCESSIBLE] VIOLATORS WILL BE FIND AND TOWED [LEFT ARROW]	1	WHITE	GREEN/ BLUE	GREEN	MOUNT ON 2" POST (1)	1.50	1.50
-	12	18	RESERVED PARKING [ACCESSIBLE] VIOLATORS WILL BE FIND AND TOWED [RIGHT ARROW]	1	WHITE	GREEN/ BLUE	GREEN	MOUNT ON 2" POST (1)	1.50	1.50
-	12	18	TOW ZONE NO PARKING LOADING ZONE 8AM - 4PM [LEFT ARROW]	1	WHITE	RED	RED	MOUNT ON 2" POST (1)	1.50	1.50
-	12	18	TOW ZONE NO PARKING LOADING ZONE 8AM - 4PM [RIGHT ARROW]	1	WHITE	RED	RED	MOUNT ON EXIST LIGHT POLE (1)	1.50	1.50
-	12	18	TOW ZONE NO STOPPING ANYTIME [DOUBLE ARROW]	12	WHITE	RED	RED	MOUNT ON 2" POST (4), EXIST POST (7), & EXIST LIGHT POLE (1)	1.50	18.00
-	12	18	TOW ZONE NO STOPPING ANYTIME [LEFT ARROW]	2	WHITE	RED	RED	MOUNT ON 2" POST (2)	1.50	3.00
-	12	18	TOW ZONE NO STOPPING ANYTIME [RIGHT ARROW]	5	WHITE	RED	RED	MOUNT ON 2" POST (3), EXIST POST (1), & EXIST LIGHTPOLE (1)	1.50	7.50
-	12	18	PARKING BY PERMIT ONLY EXCEPT SUNDAYS [DOUBLE ARROW]	1	WHITE	BLACK	BLACK	MOUNT ON EXIST POST (1)	1.50	1.50
-	12	18	PARKING BY PERMIT ONLY EXCEPT SUNDAYS [RIGHT ARROW]	3	WHITE	BLACK	BLACK	MOUNT ON 2" POST (2) & EXIST POST (1)	1.50	4.50
-	12	18	PARKING BY PERMIT ONLY EXCEPT SUNDAYS [LEFT ARROW]	4	WHITE	BLACK	BLACK	MOUNT ON 2" POST (2), EXIST POST (1), & EXIST LIGHT POLE (1)	1.50	6.00
-	12	18	PARKING BY PERMIT ONLY 4PM - 8AM EXCEPT SUNDAYS [RIGHT ARROW]	1	WHITE	BLACK	BLACK	MOUNT ON EXIST LIGHT POLE (1)	1.50	1.50
-	12	18	PARKING BY PERMIT ONLY 4PM - 8AM EXCEPT SUNDAYS [LEFT ARROW]	1	WHITE	BLACK	BLACK	MOUNT ON 2" POST (1)	1.50	1.50
-	12	18	2 HR PARKING 8AM - 8PM EXCEPT SUNDAYS [LEFT ARROW]	1	WHITE	GREEN	GREEN	MOUNT ON 2" POST (1)	1.50	1.50
-	12	18	2 HR PARKING 8AM - 8PM EXCEPT SUNDAYS [RIGHT ARROW]	1	WHITE	GREEN	GREEN	MOUNT ON 2" POST (1)	1.50	1.50

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT			BACK-GROUND	LEGEND	BORDER			
-	12	18	TOW ZONE NO PARKING STREET CLEANING 8AM TO 2PM FOURTH FRIDAY EACH MONTH	2	WHITE	RED	RED	MOUNT ON 2" POST (1) & EXIST POST (1)	1.50	3.00
R1-1	30	30	STOP	2	RED	WHITE	WHITE	MOUNT ON 2" POST (2)	6.25	12.50
R1-1	18	18	STOP	2	RED	WHITE	WHITE	MOUNT ON 2" POST (2)	2.25	4.50
R5-1	30	30	DO NOT ENTER	4	WHITE	RED/ WHITE	WHITE	MOUNT ON 2" POST (2) & EXIST POST (2)	6.25	25.00
R6-1	36	12	ONE WAY (POST BOTH SIDES)	3	BLACK	BLACK/ WHITE	WHITE	MOUNT ON 2" POST (2) & EXIST POST (1)	3.00	6.00
W1-6L	48	24	[LEFT ARROW]	1	YELLOW	BLACK	BLACK	MOUNT ON EXIST POST (1)	8.00	8.00
W1-2L	30	30	[CURVED LEFT ARROW]	1	YELLOW	BLACK	BLACK	MOUNT ON 2" POST (1)	6.25	6.25
W6-3	36	36	[2-WAY]	1	YELLOW	BLACK	BLACK	MOUNT ON 2" POST (1)	9.00	9.00
W11-2	30	30	[PEDESTRIAN]	12	YELLOW	BLACK	BLACK	MOUNT ON 2" POST (10) & EXIST POST (2) BACK-TO-BACK	6.25	75.00
W11-15	30	30	[BICYCLE] [PEDESTRIAN]	10	YELLOW	BLACK	BLACK	MOUNT ON 2" POST (6) & EXIST POST (4) BACK-TO-BACK	6.25	62.50
W16-7PR	24	12	[DOWNWARDS DIAGONAL RIGHT ARROW]	11	YELLOW	BLACK	BLACK	MOUNT ON 2" POST (7) & EXIST POST (4)	2.00	22.00
W16-7PL	24	12	[DOWNWARDS DIAGONAL LEFT ARROW]	8	YELLOW	BLACK	BLACK	MOUNT ON 2" POST (7) & EXIST POST (1)	2.00	16.00
W16-9p	24	12	AHEAD	1	YELLOW	BLACK	BLACK	MOUNT ON EXIST POST (1)	2.00	2.00
CS-2WB	12	18	2-WAY [BIKE] TRAFFIC [DOUBLE ARROW]	1	YELLOW	BLACK	BLACK	MOUNT ON EXIST POST (1)	1.50	1.50



**KITTELSON
& ASSOCIATES**

ONE WASHINGTON MALL, SUITE 1101
BOSTON, MA 02108
P 617.540.0555

[illegible]

Submission Date: 10/25/2022		
Drawn: AJD	Designed: AJD	Checked: RIN

PROJECT NO.
23826

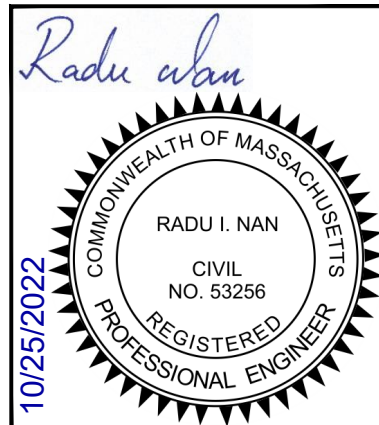
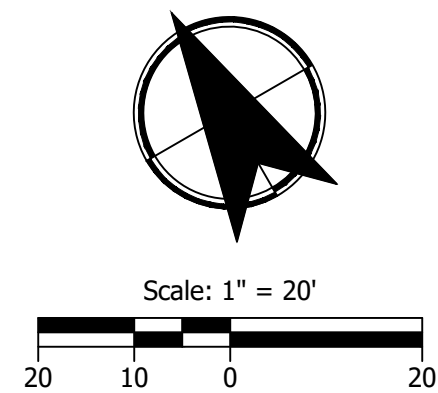
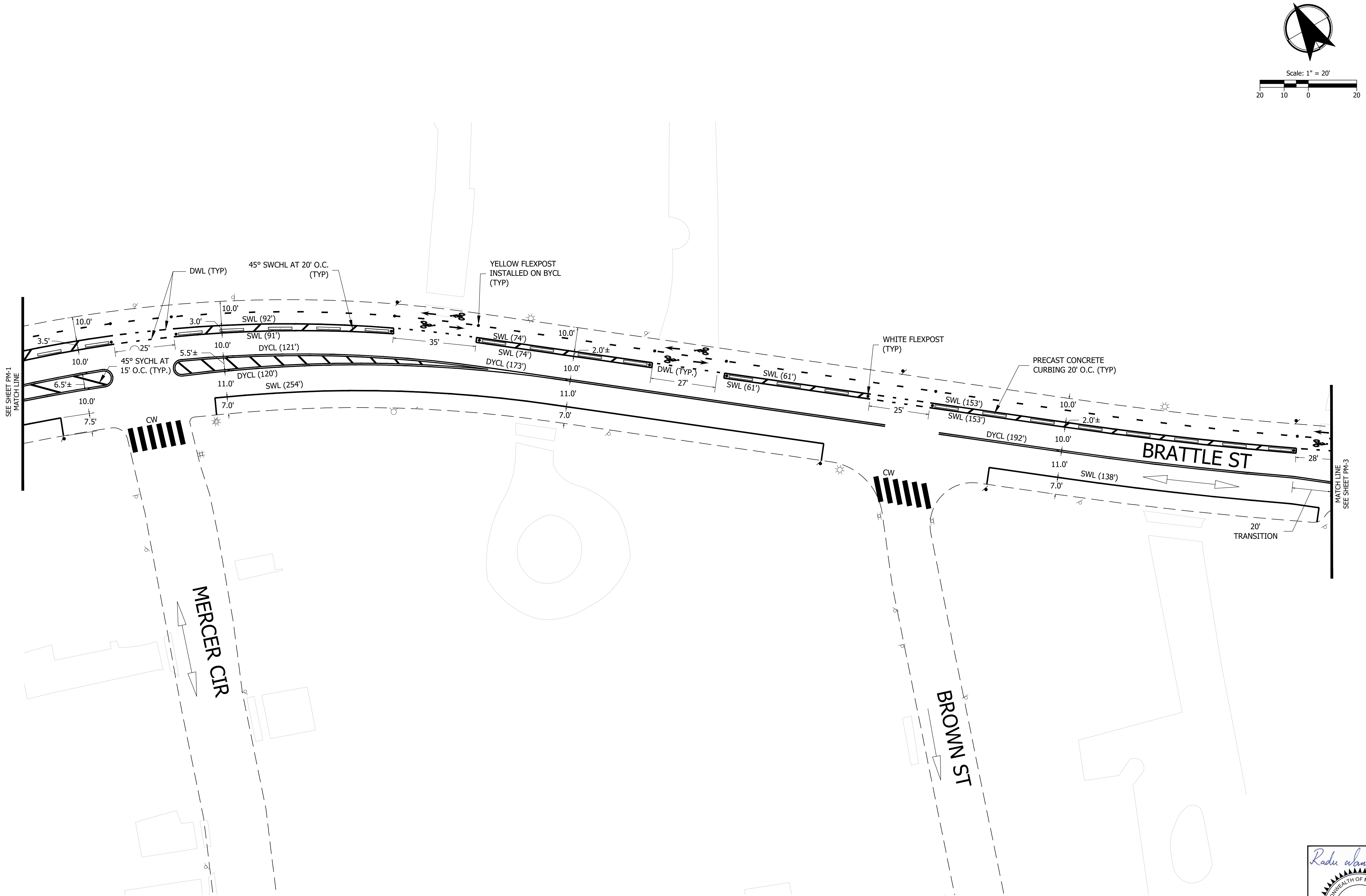
BRATTLE STREET PHASE 1

SIGN SUMMARY

SHEET NO.
SP-5



Plot Stamp: 10/25/2022 8:35:20 PM - Alec Donowitz
File: H:\23\23826 - Cambridge Engineering House Doctor\003 - Mass Ave and Brattle St_CD\23826_CD_Brattle Plan Sheets (PH).dwg



KITTELSON & ASSOCIATES
ONE WASHINGTON MALL, SUITE 1101
BOSTON, MA 02108
P 617.540.0555

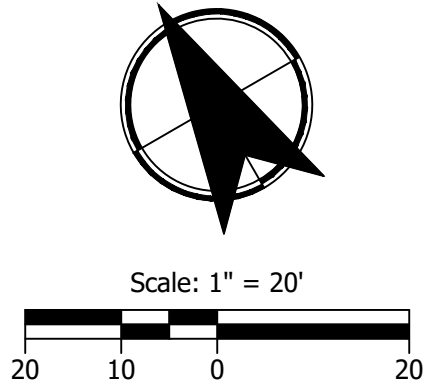
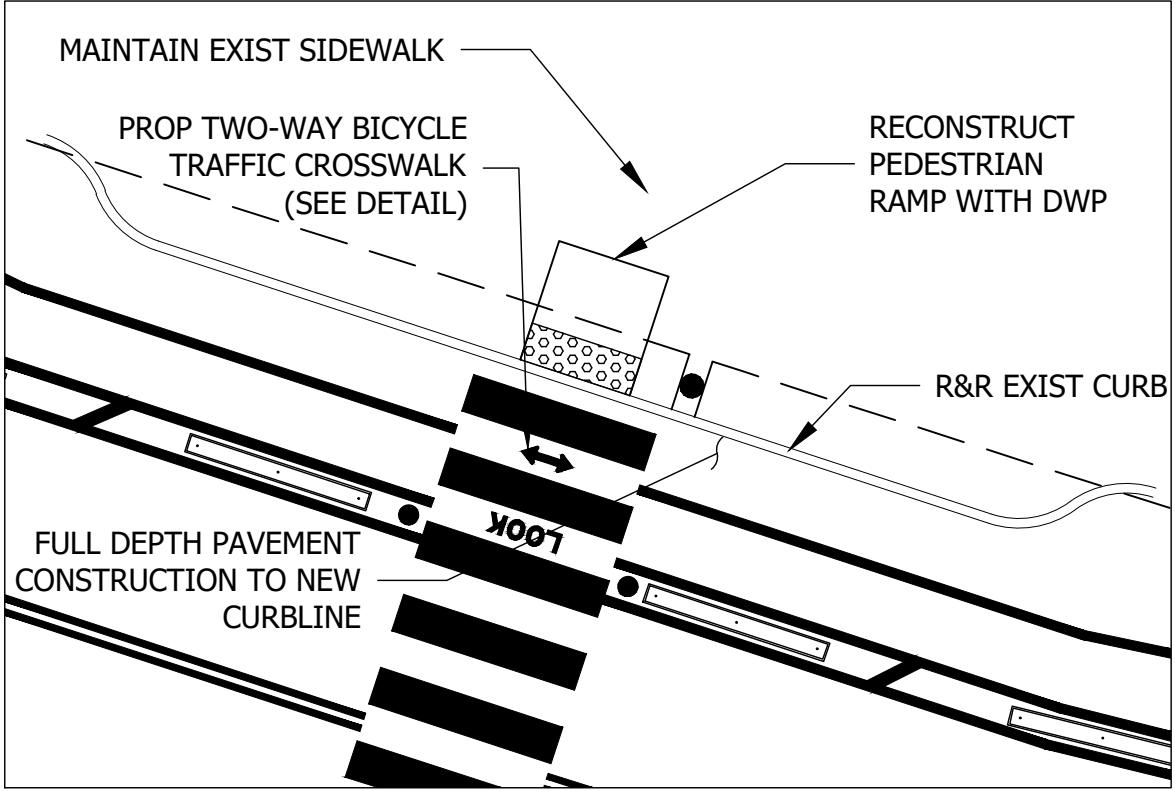
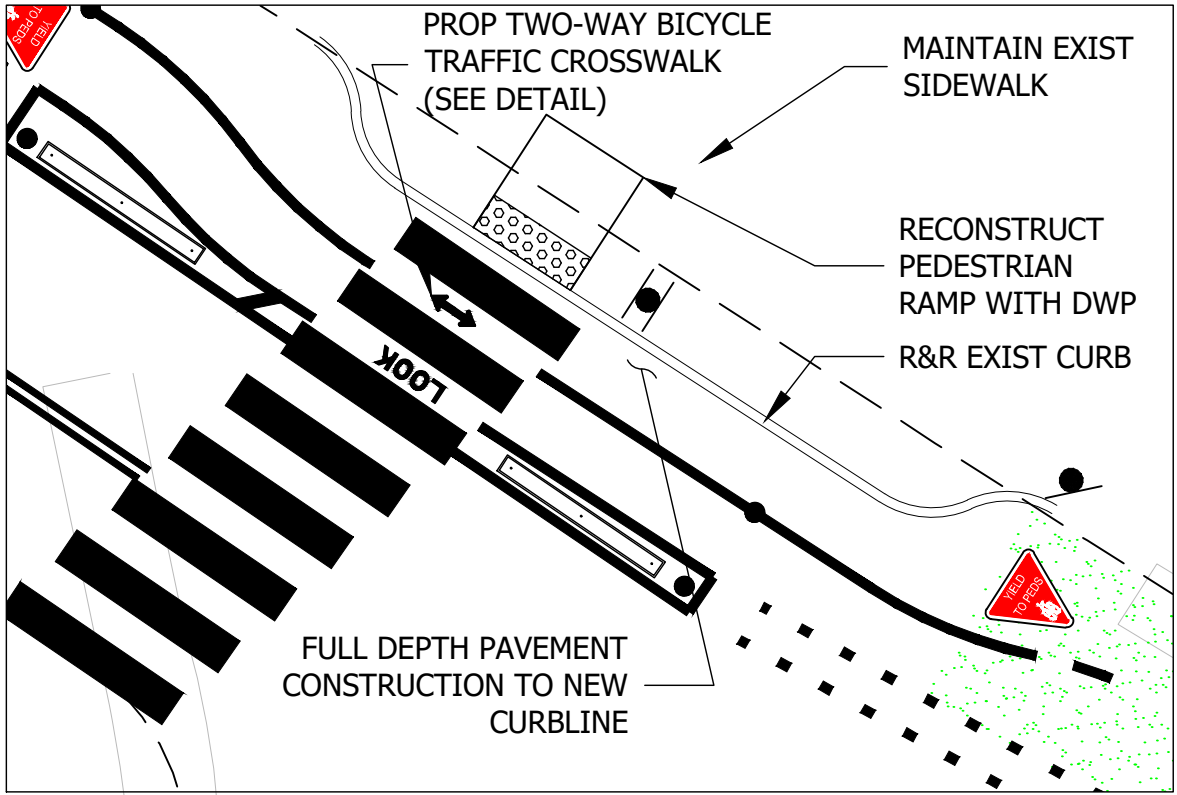
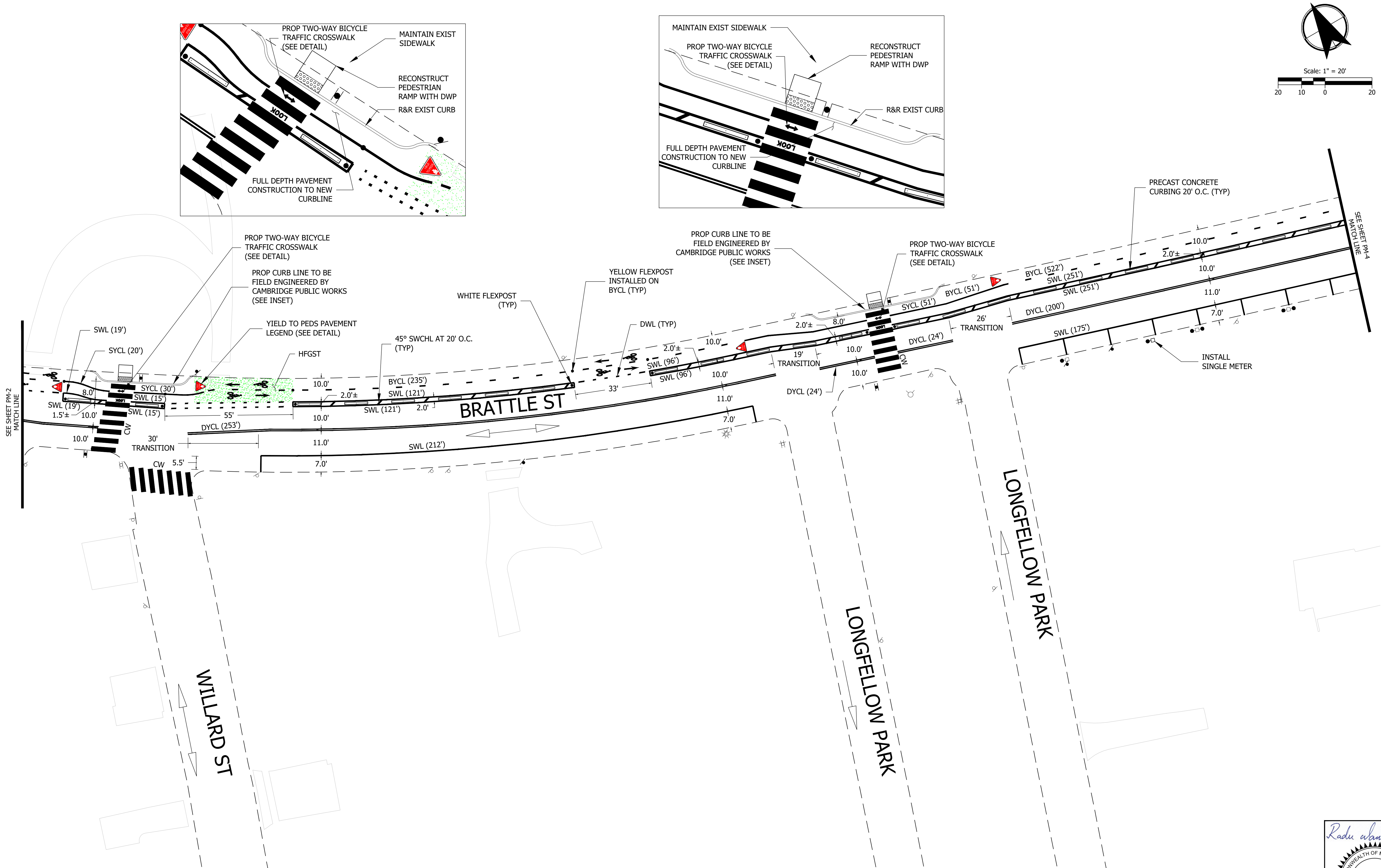
#	DATE	REVISION	APP'D

Drawn:	Designed:	Checked:
AJD	AJD	RIN

Submission Date: 10/25/2022
PROJECT NO. 23826

BRATTLE STREET PHASE 1	PAVEMENT MARKING PLAN
SHEET NO. PM-2	

Plot Stamp: 10/25/2022 8:35:27 PM - Alec Donowitz
File: H:\23\23826 - Cambridge Engineering House Doctor\003 - Mass Ave and Brattle St Quick Build\design\CD\23826_CD_Brattle Plan Sheets (PH).dwg



KITTELSON & ASSOCIATES
ONE WASHINGTON MALL, SUITE 1101
BOSTON, MA 02108
P 617.540.0555

#	DATE	REVISION	APP'D

Drawn:	Designed:	Checked:
AJD	AJD	RIN

PROJECT NO.
23826

BRATTLE STREET PHASE 1
PAVEMENT MARKING PLAN

SHEET NO.
PM-3

